properly understood as such; and would maintain, on the contrary, that it arose from the admission of a *foreign principle*, at variance with the material, and destructive of the art in its relation to architecture.

Take one more extract from Mr. Winston's essay:—"Here complicated *foreground* groups, as well as important architectural accessories, are introduced: the relative distances of the various objects are preserved by means of light and shade, and the landscape background recedes and disengages itself from the figures and architecture, imparting to the picture the effect of atmosphere." This is a description of Mr. Winston's glass of the middle of the sixteenth century: this is the style which Mr. Winston tells us we have "made to our hand" for Palladian churches, and which, in his letter, he recommends for St. Paul's. Now it is quite evident that where, as in glass, each piece has its outline of lead, besides being outlined by its own colour, the appearance of rotundity or atmospheric effect can never be satisfactorily rendered, even with the sacrifice of the transparency. But glass painters may console themselves with this, that such effects are to the full as undesirable as they are unattainable; and the leads interfere with nothing, except this most objectionable "rotundity." An attempt at illusion is out of the sphere of painted windows, and can be very well left in the hands of our oil and water-colour painters. How much can be made of a flat surface, the sculptor of the Parthenon frieze has shown. What can be made of a flat surface in glass, the inventor of the east and lesser transept windows in York Cathedral, the Abbey Church, Malvern, and many other later windows, can testify. I say nothing of the earlier artists, as their practice seems admitted, though they did it in "ignorance!" Admirable works of ignorance, which our knowledge and our science find so much difficulty in equalling!

F. W. O.

PHOTOGRAPHY ON PAPER.

A WORD OF ADVICE.

In reply to a communication from Lord Rosse, as president of the Royal Society, and Sir C. Eastlake, as president of the Academy, to Mr. Fox Talbot, setting forth that the progress of this, which is a purely British invention, was likely to be hindered by the exercise as at present of his patent rights, Mr. Talbot has made a free present of his patents to the public, with the single exception of the application of the invention to taking photographic portraits for sale to the public, which he desires still to keep in the hands of his own licensees. Those who know the large sums of money which Mr. Talbot has spent, not merely in the pursuit of the art but in securing the right to himself, under advice which he now, perhaps, regrets, will appreciate more highly than the general public the value of the gift. That it will be advantageous to the progress of the art there can be no doubt.

We may save the money and time of some of our readers who contemplate a trial of this art if we say, that unless they are determined to apply themselves vigorously to it, and to work out success through many failures, they may as well abandon at once their intention. Those who, being interested in the sale of the materials and apparatus used, would persuade them it is a very easy affair to obtain satisfactory results and brilliant pictures, only deceive. The instructions for amateurs are still so far from definite, that months will scarcely make a decent photographer out of one unused to such matters. Notwithstanding the books published on the subject, there is still a want of clear and precise explanations of how to make a picture; and the French writers are as far from giving this as our own countrymen. The object at present appears to be simply how to lead the greatest number of persons who want a royal road to art to purchase a quantity of costly apparatus and tickfish chemicals, a new paper, a fresh acid; and we therefore feel it our duty to put the public on their guard, and to urge those who can do so to make the matter a little clearer than it is at present. We look for less humbug and more knowledge.

AMERICAN WORKS.

New York Iron Foundries.—In a sketch of the works in progress at the principal iron foundries of that city, the *New York Courier and Inquirer* asserts that there are no foundries in England that cast such massive pieces of machinery as those executed in New York; and, in proof of this, describes the operations of several of the principal firms. It states that twelve iron columns, cast by Messrs. Mott and Ayres, of the Chelsea Ironworks, for the Manhattan Gas Company, are the largest ever cast by 10 feet 8 inches, measuring 50 feet 8 inches in length, 3 feet in diameter at the base moulding, 2 feet at the cap moulding, and weighing 27,360 pounds each;—that they have been erected about the gasometer, and are surrounded by girders 45 feet in length. That they were also preparing an iron steamer for a passenger boat on the Magdalene river. Her hull is of iron, rivetted together, and the deck is composed of white pine. She measures 167 feet in length on deck, 30 feet beam, and 7 feet hold, and it is calculated that she will carry 70 tons, while drawing only 2 feet 9 inches of water. When heavily loaded she will carry 330 to 350 tons. Mr. Milligan, of the Warren-street Foundry, had invented what he has entitled the "Vertical Flue Boiler," which he has patented in that country and in England. The construction of this boiler is such that double the quantity of fire and surface can be brought in the same compass over the other boilers now in use, and it is claimed to be more effectual. All other boilers have horizontal flues and vertical tubes. One advantage is a boiler of half the ordinary size, taking less room, and requiring but half the quantity of water. The strength of the fire acting on the surface of the water has the effect of making steam with less fuel. In making the steam at the top of the flue it escapes more rapidly into the chamber. He was completing a boiler of this description to be used in moulding and planing mills, in 37th-street, with an engine 100-horse power. The boiler is 13 feet long, 7 feet wide, and 9 feet in height. Wilson Small was casting a variety of very heavy and peculiar pieces of machinery for the Naphtha Company, at Brooklyn, to be used in manufacturing oil from rosin. These castings are entirely original, and are called "stills." Mr. Rodney, of the City Foundry, had recently completed and sent to their destination four engines and stamping mills, for quartz crushing in California. Hogg and Delamater were principally engaged in constructing "Ericsson's Caloric Engine." The *Courier*, moreover, gives details of many other works, such as great steam-engines, chiefly for marine use, dredging barges inclusive, which it states are now worked by their own impelling engines in place of being dragged by other steamers.

Submarine Rock Blasting.—The reef rocks at Hurl Gate, New York, are in course of being blasted, and the *New York Tribune* of 22nd ult. in describing a resumption of the process, says,—"The firing recommenced on Way's Reef. Since then thirty-eight charges have been fired on that rock, and we hope it will be reduced to fifteen feet mean low water before the close of next week. The firing on Way's Reef is from a battery of ten pairs of plates, placed on the metal float moored on that reef. As many as nine charges have been fired during a single tide. As soon as Way's Reef is broken down, 'Shell Drake Rock' will be fired upon, until it is reduced to fifteen feet below mean low water. After that, 'Frying Pan,' a very dangerous rock in mid-channel, and in rapid and deep water, will be attacked, and the firing continued on that rock until it is reduced to the same depth as Pot Rock, namely 20½ feet below mean low water. As soon as the rocks here mentioned shall have been reduced to the depths respectively stated above, operations, by Messrs. Maillefert and De Raasloff, will be commenced on Diamond Reef, situate between Governor's Island and the Battery. This is a large rock in 16 feet water. A charge containing 500 lbs. of powder will be fired on this rock. Two blasts will be made on Hallets Point, at the Gate, in which a preparation of potash will be used for blasting. The whirlpool has been entirely filled up by the *débris* of Pot Rock, and the smallest row-boat may pass over what was once Pot Rock, at any time of tide. This great and wonderful result M. Maillefert has accomplished by the firing on the surface of the rock under water without any drilling, 284 submarine charges, containing in all 34,231 lbs. of powder, and at a cost of less than 7,000 dollars. The money now being used to pay the expense of removing these rocks, is obtained as a temporary loan, at the rate of 6 per cent. per annum, and is to be repaid from subscriptions to a loan, reimbursable by the general or state government, or from other funds, hereafter to be raised. It is a work of great importance to the United States, and in fact to the whole world, and is conducted with the greatest economy. We purchase the powder, blasting-cans, and ballast-bags with ready money, and pay M. Maillefert weekly a stipulated price for each charge fired on the rock; he furnishing the labourers employed, the wires, battery, and floats. The expense of removing Pot Rock, Frying Pan, and Diamond Reef, to the depth of 20½ feet, and Way's Reef and Shell Drake Rock to the depth of 15 feet below mean low water, will probably not exceed 15,000 dollars. The success that has attended M. Maillefert's new mode of submarine blasting will greatly benefit the commerce of the world, will be the means of saving thousands of lives and millions of dollars in value of property; for this system of submarine blasting will be adopted in every place where dangerous rocks obstruct navigation, inasmuch as but a small sum of money is required to pay the expense, compared with what would be required under the old system. His excellency the Portuguese minister takes great interest in these operations, and he has communicated to his government the result thus far obtained at Hurl Gate. In April last the Portuguese war steamer *Porto* made dreadful shipwreck on a rock in the harbour of Oporto. The most influential families in that city have now obtained one of the Francis metallic life-boats, and are in hopes to obtain the services of Messrs. Maillefert and De Raasloff to remove this dangerous rock by submarine blasting. M. Maillefert has entirely recovered from the wounds he received by the disastrous explosion of a blasting-can above water, during the operations on Frying Pan, on 26th March last."

Boston Grave-stones.—In excavating for a common sewer in Atkinson-street, says the *Boston Journal*, at the depth of about 6 feet a gravestone was found, on which is the following inscription:—"Here lyes ye body of Mr. James Areaking, son of ye Reverend Mr. Areaking, in Scotland, aged 35 years. Died ye 1st Octor 1711." These mementoes of mortality are frequently disinterred in various parts of our city, and are evidence, not that bodies were interred in our streets, but that our ancestors were very careless of their gravestones, which were taken from the burial-ground to cover sewers.

The New York Exhibition.—The opening is definitively fixed for Monday, 2nd May, 1853. Ample funds, it is reported, have been subscribed to carry out the undertaking in a brilliant manner, and all parties join in forwarding its success. The corporation has granted a site for the building—the Legislature has incorporated the association—the Customs has constituted the building a bonded warehouse—and the company undertake to carry out and bring back if unsold, all articles intended for exhibition, free of expense to the owners.

Self-acting Breaks to Railway Carriages.—A trial has been made on the South-Western Railway of a means of applying self-acting breaks, with a view to prevent accidents. On all occasions of stopping, it is said, the breaks acted satisfactorily: when the speed was great and the stoppage sudden, the self-acting breaks brought the wheels to a "dead lock;" on other occasions not applying themselves so forcibly. When the train was backed the breaks were instantaneously thrown out of action by the guard.

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